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RevisiON History:

| Rev. | Date | Description | Author |
|------|-------------|---|--------|
| 1.00 | Mar.9, 2016 | 1 st Release | Y.O |
| 1.01 | Jul.29.2016 | Add the information of BU-2RWL | K.T |
| 1.02 | Aug.24.2016 | Updated for Ver4.0.1 | K.T |
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1. What is UPS Setting Utility?

UPS Setting Utility is software for configuring the settings of UPS. By using this software, you can change the settings of your UPS easily.

Example: To stop the UPS when a power outage occurs without using shutdown software

→ Configure the "Max backup Time".

You can also back up the settings of your UPS into a file or transfer them to another UPS device.

[Settable items]

1. [Basic] group
Audible Alarm; AC Input Sensitivity; Cold start; and Max backup Time
2. [Boot] group
Start up Self Test; Every 4 Week Self Test; Reboot Delay Time;
Reboot Battery Level; D.C. Start; Auto Reboot; and Auto Reboot Mode (BS signal)
3. [UPS Dry Contact] group
BS Signal Delay Time; BU Signal Delay Time; BS Signal Valid Range; BS Signal Time;
Remote ON/OFF Logic; Dry Contact Logic; and Selectable Output Signal
4. [Load Segments] group
ON Delay Outlet A/B/C; and OFF Delay Outlet A/B/C
5. [In/Out] group
Output Voltage; Frequency Range; ECO Mode; Input Plug; Transfer Sensitivity; Max Momentary Loss Time, and Power SW OFF Mode
6. [Battery] group
Battery Life Counter; UPS Life Counter; Low Battery Warning; UPS Installation;
Battery Installation; Additional batteries; and BMS setting
7. [LCD, Other] group
LCD Language; LCD Auto OFF; Memorandum; Calendar; and Log

[Utility functions]

1. Function to send and receive commands
2. Function to save settings into a backup file
3. Function to restore settings from a backup file
4. Function to load UPS settings
5. Function to return UPS settings into their default values

2. UPS Setting Utility Operating Environment

| | |
|---------------------|--|
| Supported computers | DOS/V PC |
| Supported OS | Windows 11/10 Windows Server 2022/2019/2016/2012R2/2012 Windows 10 IoT Enterprise LTSC |
| Interface | RS232C USB * RS232C communication setting: 2400bps/8bit/1bit/none |
| Target UPS | [S8BA series] S8BA-24D24D120LF / S8BA-24D24D240LF S8BA-24D24D360LF / S8BA-24D24D480LF S8BA-24D24D480SBF / S8BA-24D24D960SBF |

3. Software License Terms

1.WARRANTY

- (1) The warranty period for the Software is one year from the date of purchase, unless otherwise specifically agreed.
- (2) If the User discovers defect of the Software (substantial non-conformity with the manual), and return it to OMRON within the above warranty period, OMRON will replace the Software without charge by offering media or download from OMRON's website. And if the User discovers defect of media which is attributable to OMRON and return it to OMRON within the above warranty period, OMRON will replace defective media without charge. If OMRON is unable to replace defective media or correct the Software, the liability of OMRON and the User's remedy shall be limited to the refund of the license fee paid to OMRON for the Software.

2.LIMITATION OF LIABILITY

- (1) THE ABOVE WARRANTY SHALL CONSTITUTE THE USER'S SOLE AND EXCLUSIVE REMEDIES AGAINST OMRON AND THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. IN NO EVENT, OMRON WILL BE LIABLE FOR ANY LOST PROFITS OR OTHER INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF USE OF THE SOFTWARE.
- (2) OMRON SHALL HAVE NO LIABILITY FOR DEFECT OF THE SOFTWARE BASED ON MODIFICATION OR ALTERNATION TO THE SOFTWARE BY THE USER OR ANY THIRD PARTY.
- (3) OMRON SHALL HAVE NO LIABILITY FOR SOFTWARE DEVELOPED BY THE USER OR ANY THIRD PARTY BASED ON THE SOFTWARE OR ANY CONSEQUENCE THEREOF.

3.APPLICABLE CONDITIONS USER SHALL NOT USE THE SOFTWARE FOR THE PURPOSE THAT IS NOT PROVIDED IN THE ATTACHED USER MANUAL.

4.CHANGE IN SPECIFICATION The software specifications and accessories may be changed at any time based on improvements and other reasons.

5.ERRORS AND OMISSIONS The information in this manual has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical, or proofreading errors, or omissions.

4. How to Connect UPS to Your Computer

To use "UPS Setting Utility", you must connect the UPS to your computer by any of the methods below.



| UPS model | Connection | Dedicated cable |
|-------------------|--------------|-------------------|
| S8BA-24D24D120LF | Connection A | option "S8BW-C01" |
| S8BA-24D24D240LF | | |
| S8BA-24D24D360LF | Connection B | bundled for UPS |
| S8BA-24D24D480LF | | |
| S8BA-24D24D480SBF | | |
| S8BA-24D24D960SBF | | |

NOTE





Note that "UPS Setting Utility" cannot be used when UPS communicates with OMRON's automatic shutdown software (such as Simple Shutdown Software, PowerAct Pro, PowerAttendant Lite).

If shutdown software is installed on the same computer, stop the agent of shutdown software before using "UPS Setting Utility".





Please restart the shutdown software agent after using "UPS Setting Utility",

Stop and restart procedure.:

■ In case of "PowerActPro MasterAgent" or " Simple Shutdown Software"

- ① Right click "  " in task tray and click "Agent Stop" on the menu.
→Turning to "  " means stop of agent.
- ② Right click "  " in task tray and click "Agent Start".
→Turning to "  " means stop of agent.

■ In case of PowerAttendant Lite

- ① Right click "  " in task tray and click "Agent Stop" on the menu.
→Turning to "  " means stop of agent.
- ③ Right click "  " in task tray and click "Agent Start".
→Turning to "  " means stop of agent..

5. How to Use UPS Setting Utility

5-1. Starting up the application and establishing communication with the UPS

1. Starting up the application

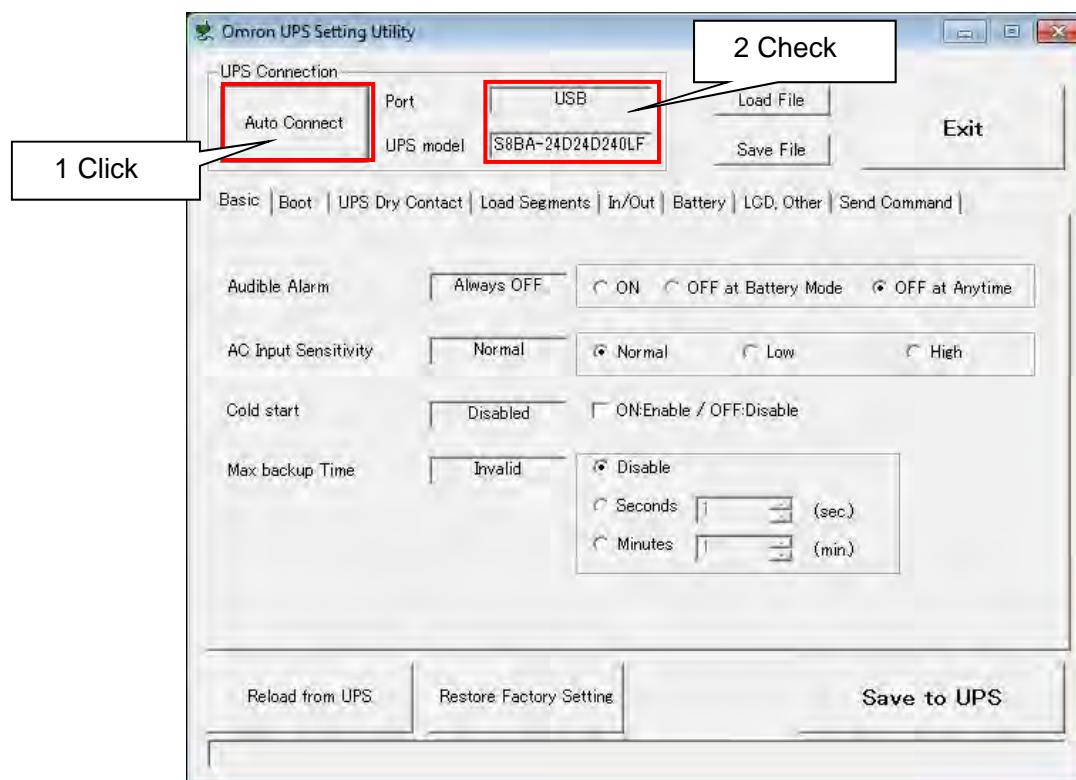
Click "UPSSettingTool.exe". UPS Setting Utility starts up.

(Installation is not required. You can use the application just by executing UPSSettingTool.exe.)

2. Establishing communication with the UPS

Click [Auto Connect] and the software automatically looks for the UPS connected to your computer and enables communication. It takes several seconds to several ten seconds for the software to find the UPS.

When communication is established, information is correctly displayed in the [Port] and [UPS model] fields. If "The connected UPS did not exist" appears, the UPS may not be recognized or the communication port may be occupied by another application.

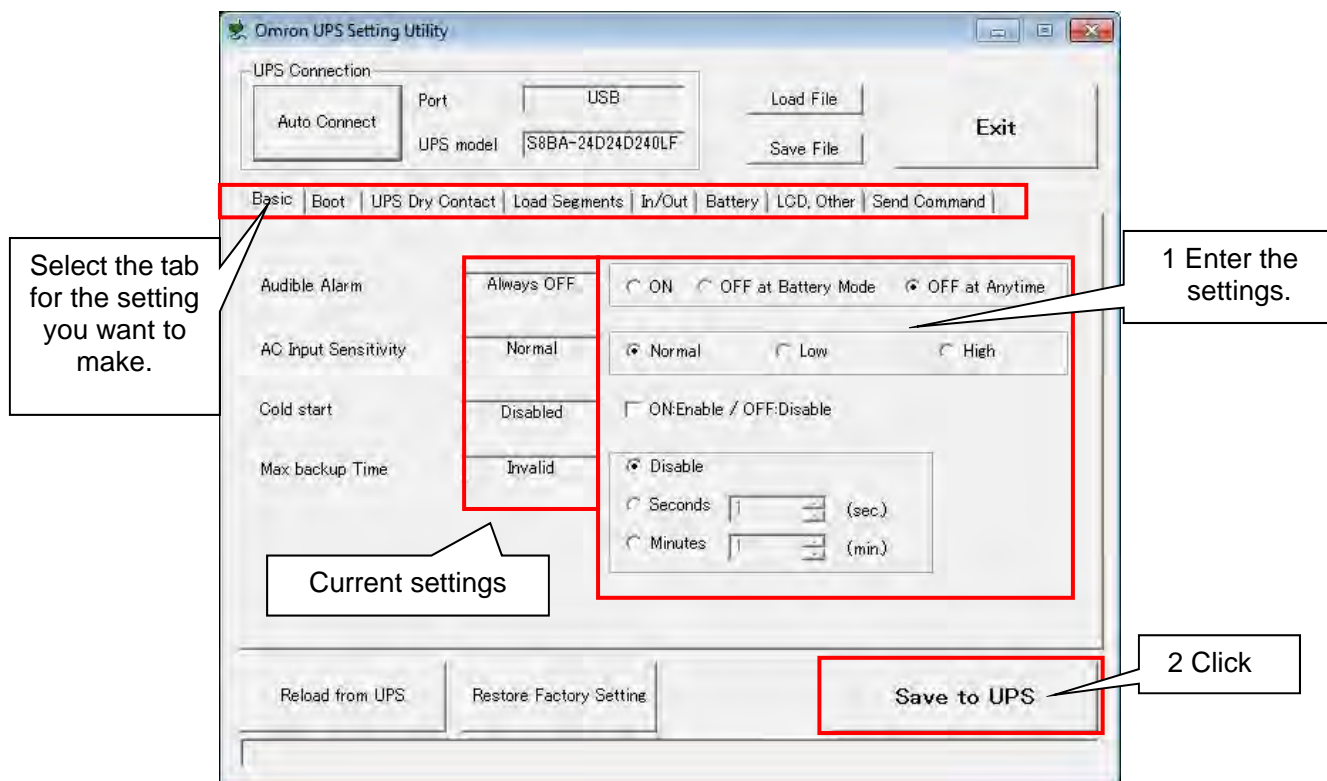


5-2. Changing the UPS settings

3. Entering the UPS settings

Enter the UPS settings. The current settings are displayed in the text boxes.

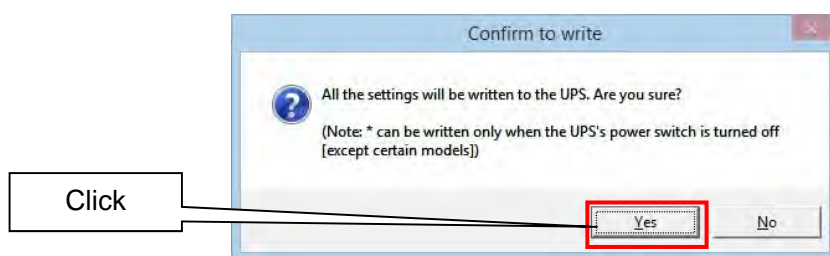
After entering all settings, click [Save to UPS], and the changed content will be written into UPS. (For details on the meaning of each setting, how to make each setting, and so on, refer to item 7.)



4. Checking before writing the set content

Check before writing the set content. The setting for an item with "*" can be changed only when the UPS's power supply switch is turned OFF. To change the setting for such an item, check that the UPS's power supply switch is turned OFF, and click [Yes]. (The setting for an item without "*" can be changed even when UPS's power supply switch is turned ON.) Note that it takes five to ten seconds to write the set content completely. When the content displayed for [Current settings] is updated to the content after change, the writing process is successful.

*** Regardless of the tab selected, all the changed settings will be rewritten. Be careful.**



5. Saving the set content into the nonvolatile memory (EEPROM) inside UPS

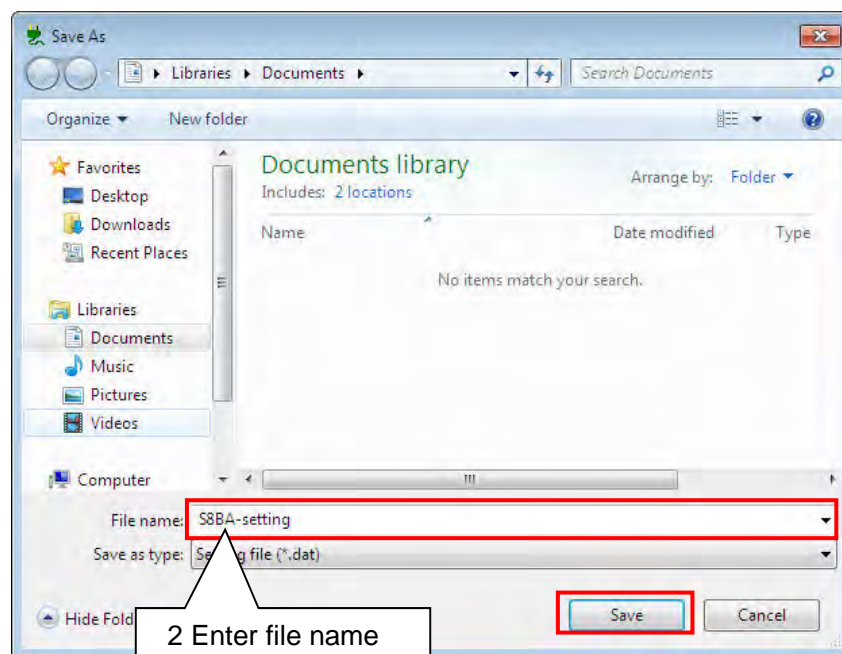
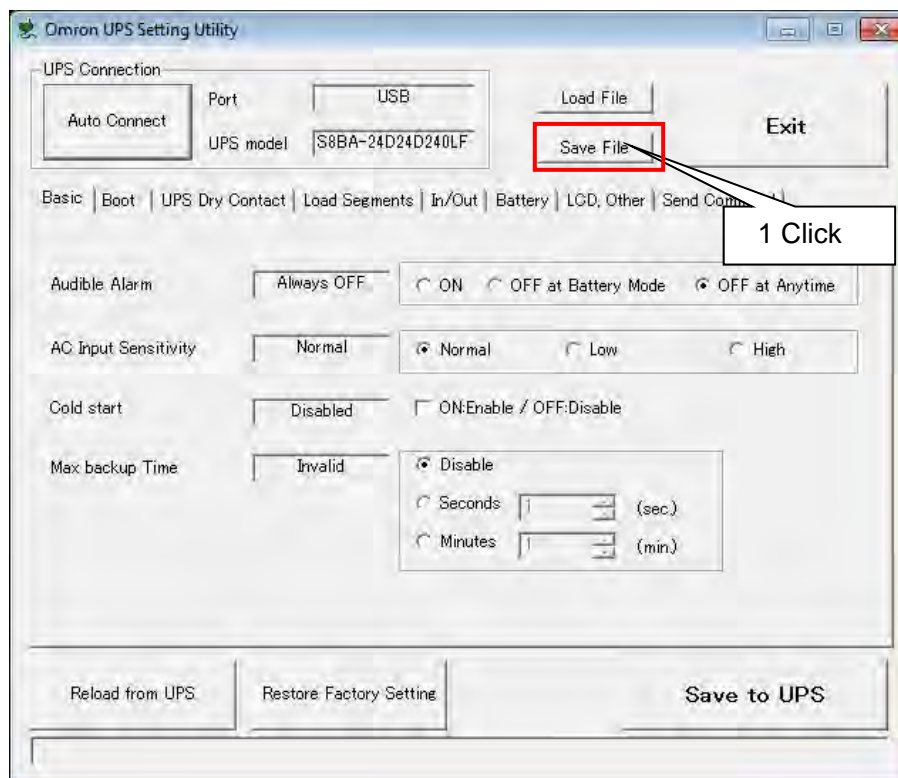
Turn OFF the UPS's power supply switch, and then turn OFF the UPS's input power supply. (Check that the indicators on the UPS's operation display section have all been turned OFF.) The set content will be saved into the nonvolatile memory (EEPROM) inside the UPS.

5-3. Backing up the settings

6. Backing up the settings

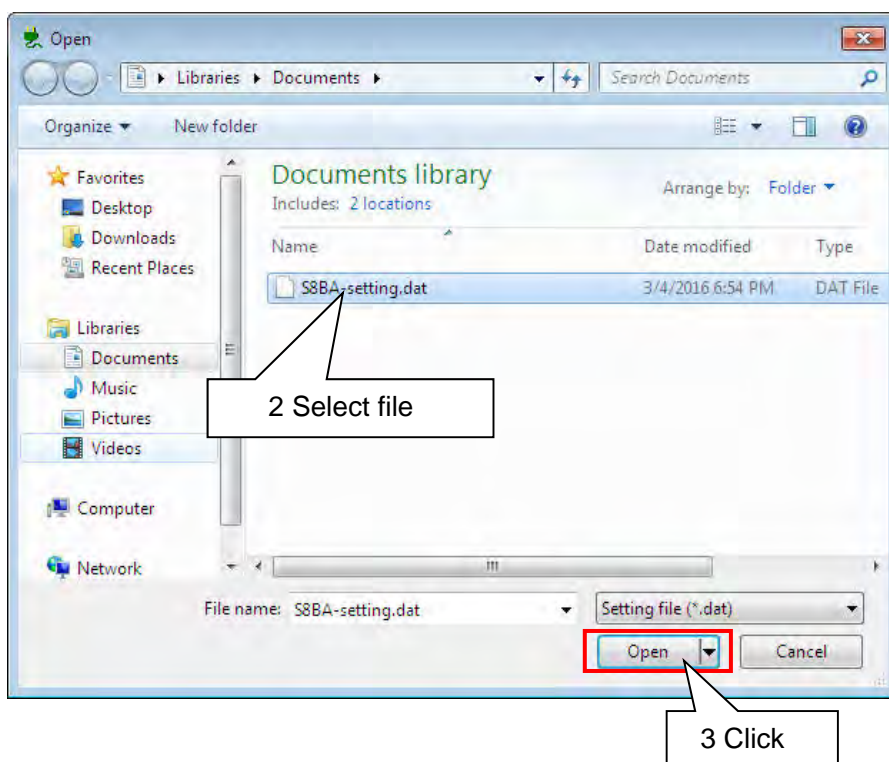
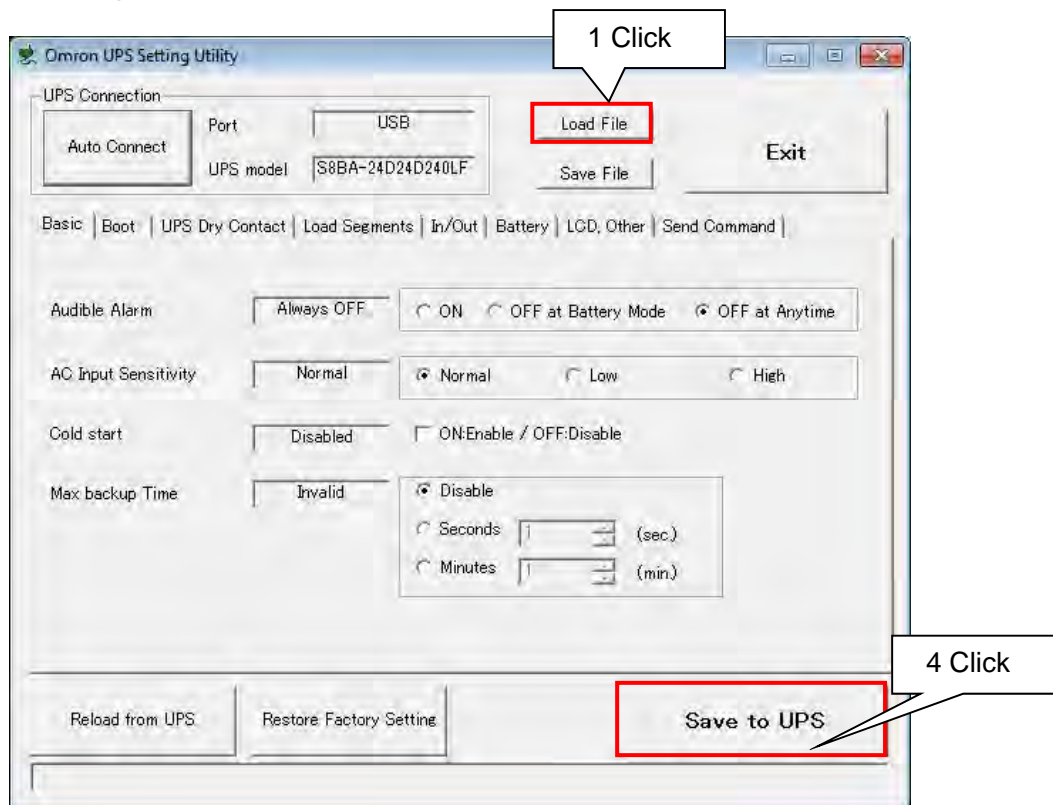
You can back up the settings of the UPS into a file.

To perform a backup, click [Save File]. The set content is saved as text data. (The file extension is ".dat".)



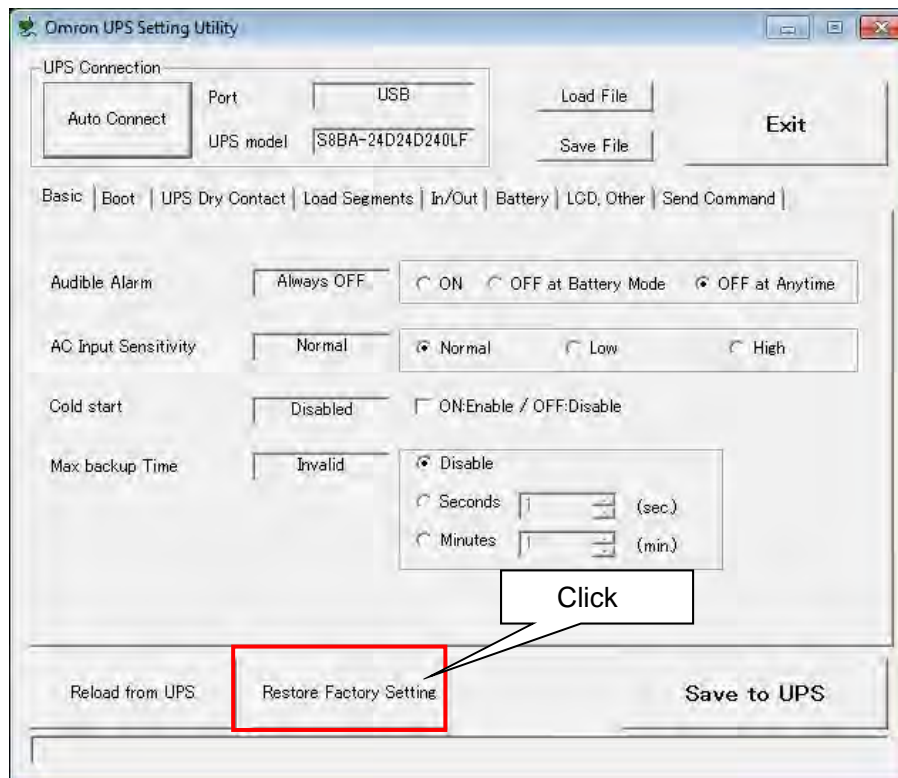
5-4. Restoring UPS settings from a UPS settings backup file

7. You can restore UPS settings from a backup file. Click [Load File] and select a backup file. Click [Save to UPS] and the settings of the backup file will be written into the UPS.



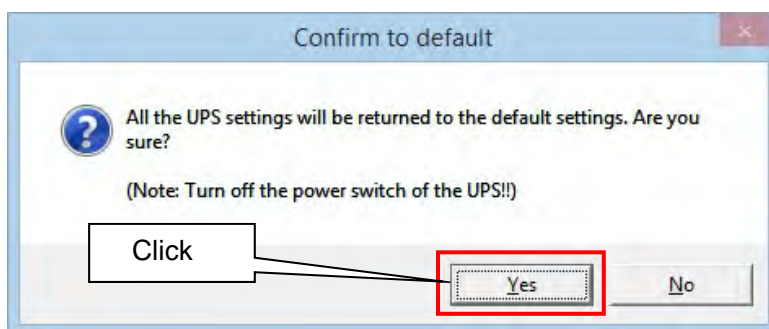
5-5. Returning the UPS settings into their default (factory default) state

8. You can return the UPS settings into their default (factory default) state. Click [Restore Factory Setting].



9. Checking before returning the UPS settings to their default state
You must turn OFF the UPS's power supply switch before returning the settings to their default state. Check that the UPS's power supply switch is turned OFF, and then click [Yes]. Note that it takes five to ten seconds to write the content completely.

* **Regardless of the tab selected, all the changed settings will be replaced with their default values. Be careful.**

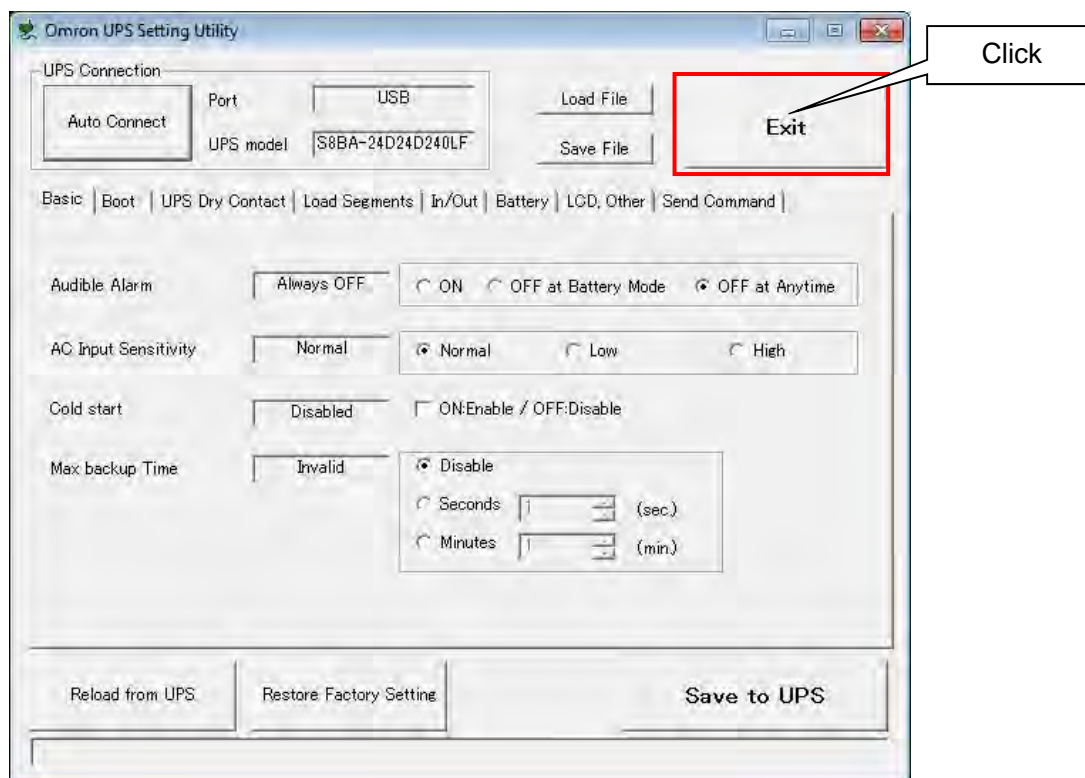


<Notice>

S8BA-24D24D480SBF and S8BA-24D24D960SBF dose not have power switch.
So, these UPS can not use [Restore Factory Setting].
Do not click the [Restore Factory Setting] regardless of the selected tab.

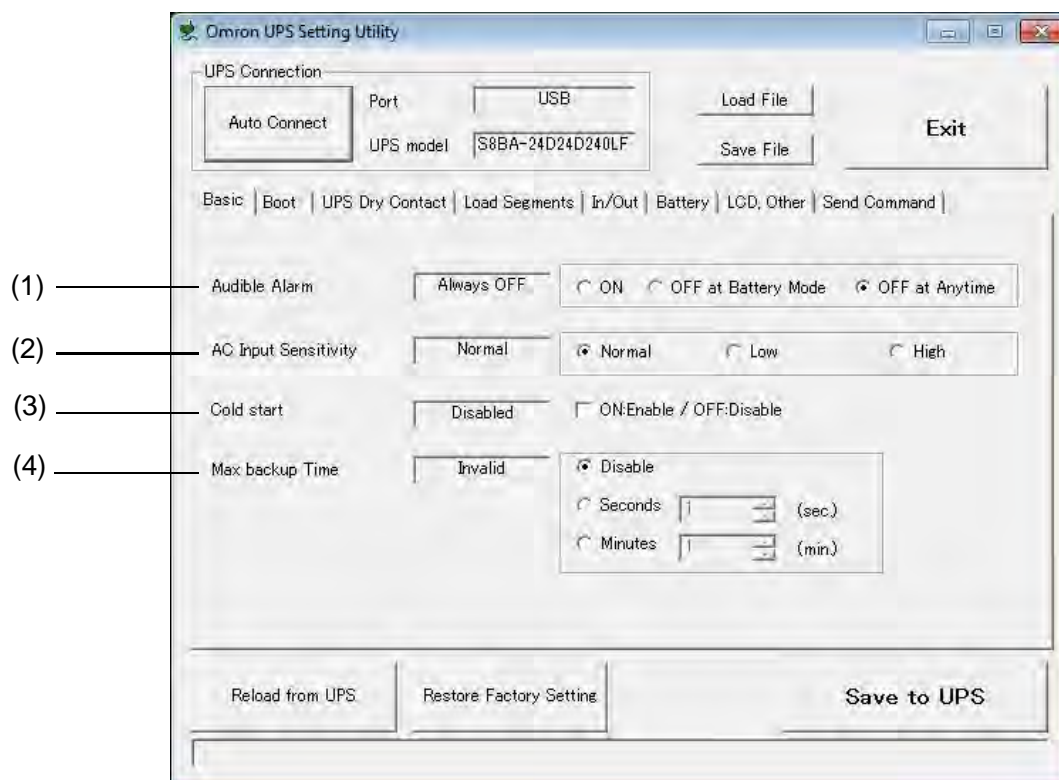
5-6. Terminating the application

10. To terminate the application, click [Exit].



6. Detailed Explanations on Settings

6-1. [Basic] group



(1) Audible Alarm

• Settings

Set whether the UPS's alarm "sounds/does not sound" if an error occurs, and so on when in Battery mode.

- ON: Enables the alarm. Sounds the alarm.

- OFF at Battery Mode: Does not sound the alarm when in Battery mode or when the battery is deteriorated.

- OFF at Anytime: Disables the alarm. Does not sound the alarm.

*** When [OFF at Battery Mode] or [OFF at Anytime] is selected, the alarm to alert you for battery replacement also ceases to sound. Be careful about battery management in such a case.**

| | ON | OFF at Battery Mode | OFF at Anytime | |
|--|-------------------|---------------------------|---------------------------|--|
| During backup operation | Sounds the alarm. | Does not sound the alarm. | Does not sound the alarm. | |
| When the battery level is low | | | | |
| When the battery is deteriorated | | Sounds the alarm. | | |
| When overload is occurring | | | | |
| When interruption occurs due to overload | | | | |
| When an internal error occurs | | | | |

• Usage

If you want to sound the alarm.

(2) AC Input Sensitivity

• Settings

Set the input voltage sensitivity for the UPS to switch to Battery mode.

- Normal: Sets the mode to standard voltage sensitivity.

- Low: Sets the mode to low voltage sensitivity.

- High: Sets the mode to high voltage sensitivity.

• Usage

If you want to change the voltage at which the UPS switches to Battery mode.

(3) Cold start

• Settings

Set the Cold start mode for the UPS.

- ON (selected): Enables cold start.

You can start the UPS without input power supply.

- OFF (cleared): Disables cold start.

You can start the UPS only when an input power supply is available.

• Usage

If you want to use the UPS as a battery power supply in an environment where no input power supply is available.

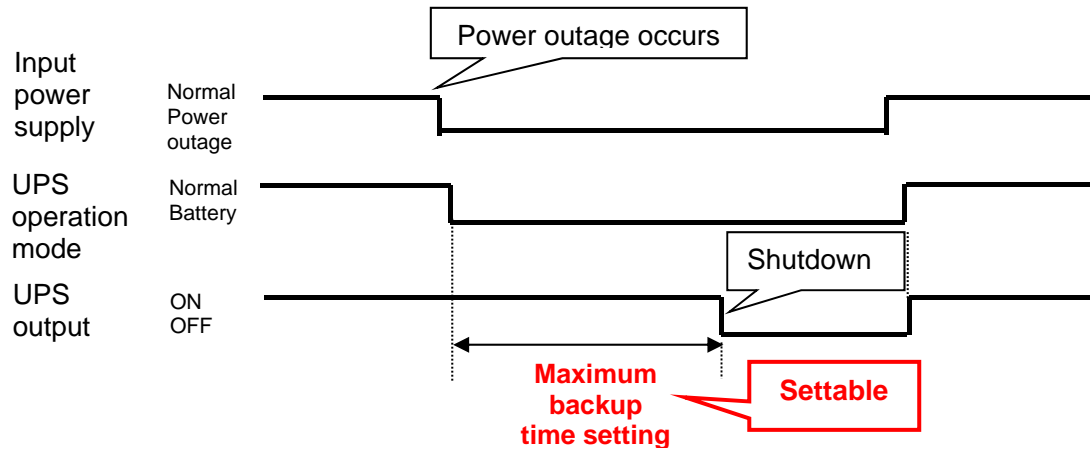
(4) Max backup Time

- Settings

Set the maximum backup time for the UPS.

When a power outage occurs, after the battery mode continues for the specified period of time, the UPS stops outputting power.

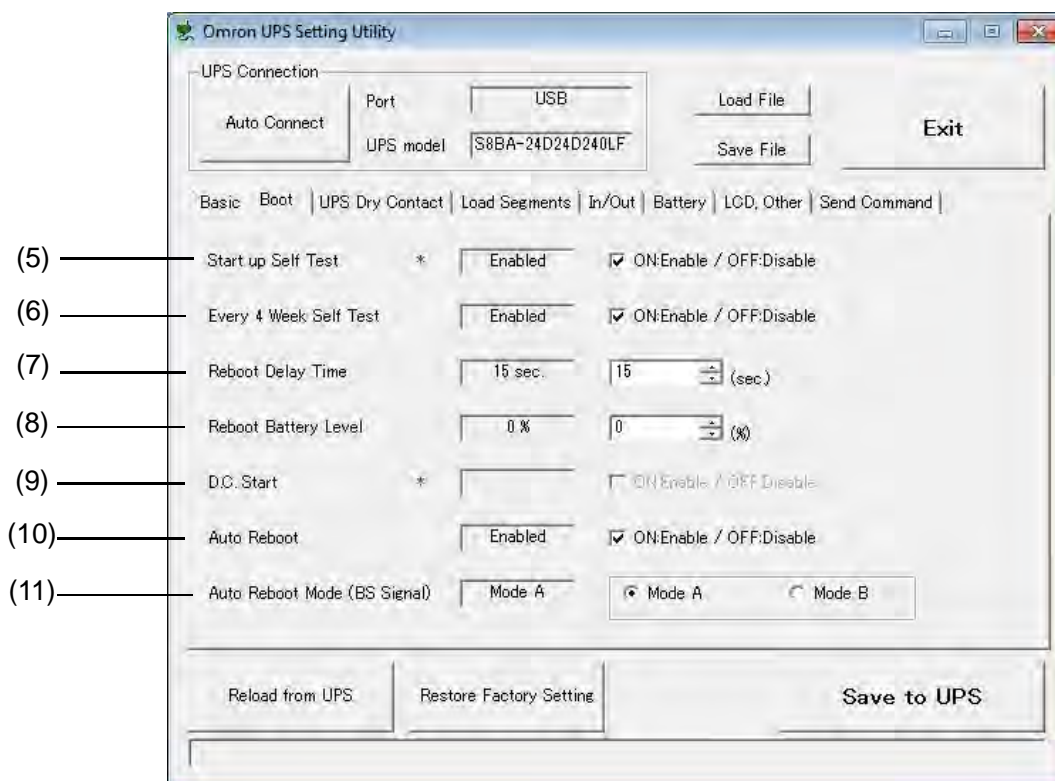
Shutdown software is not required for stopping the UPS.



- Usage

If you want to shutdown the UPS after a specific period of time elapses without using a computer or controller.

6-2. [Boot] group



(5) Start up Self Test

- Settings

Set whether a self diagnosis test is automatically executed when the UPS is powered ON.

- ON (selected): A self diagnosis test is executed when the UPS starts up.

- OFF (cleared): A self diagnosis test is not executed when the UPS starts up.

- Usage

If you do not want to execute a self diagnosis when the UPS starts up.

(6) Every 4 week Self Test

- Settings

Set whether a self diagnosis test is automatically executed every four weeks.

- ON (selected): A self diagnosis test is executed every four weeks.

- OFF (cleared): A self diagnosis test is not executed every four weeks.

- Usage

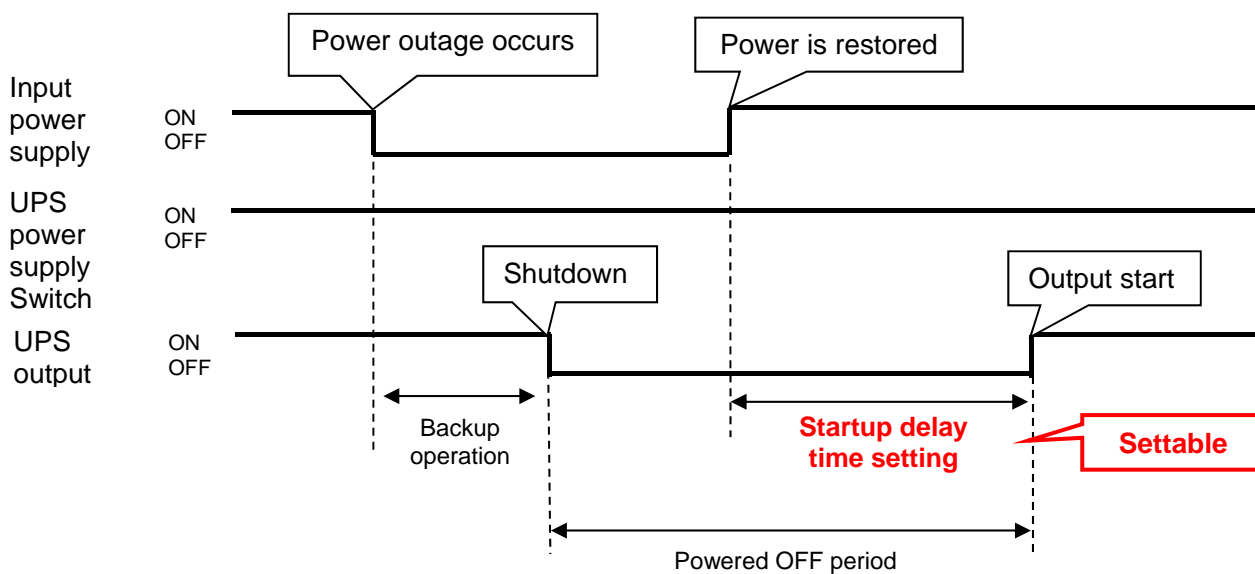
If you do not want to execute a self diagnosis every four weeks.

(7) Reboot Delay Time

- Settings

Set the reboot delay time for the case in which the UPS is automatically started when power is restored after UPS shutdown.

The UPS starts outputting power in the timing delayed for the period of time set at the time of restart.



- Usage

If you need to secure a sufficient powered-OFF period for restarting connected equipment when power is restored.

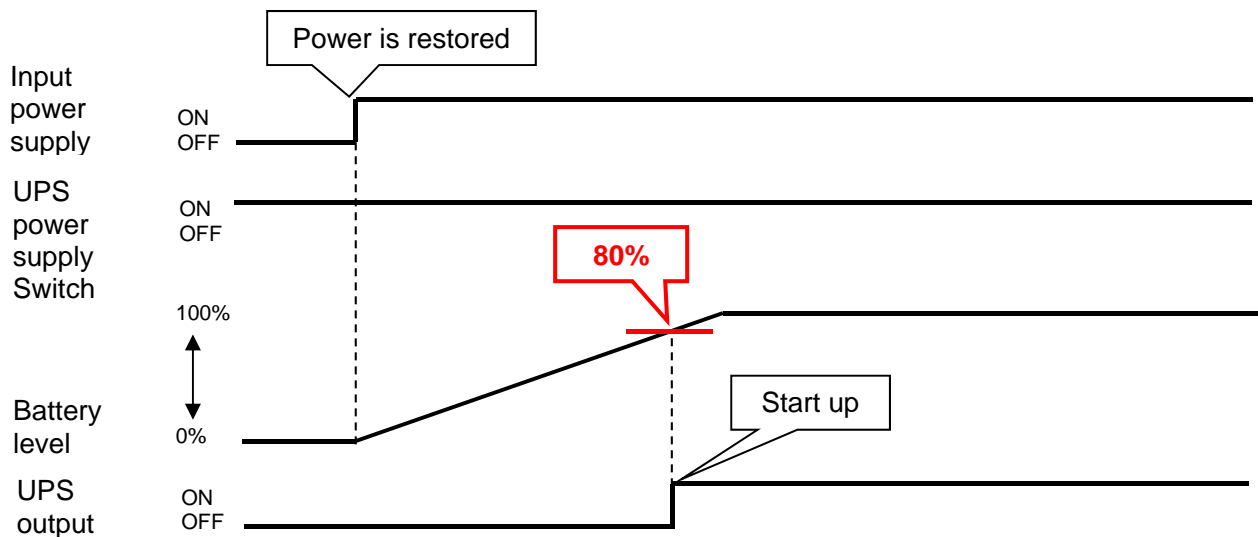
(8) Reboot Battery Level

• Settings

Set the battery level at which the UPS can start up.

Even at the time power is restored, the UPS starts only when the battery level becomes equal to or higher than the specified value.

Example: When '80%' is set for the startup battery level.



• Usage

If you want to secure sufficient backup time even when a power outage occurs immediately after the UPS starts up.

(9) D.C. Start

• Settings

Set DC startup (startup in Battery mode).

- ON (selected): Enables DC startup.

When the power supply switch turns ON, the UPS runs in Battery mode once, and then returns to normal operation.

- OFF (cleared): Disables DC startup.

When the power supply switch turns ON, the UPS runs in normal operation.

• Usage

When the power supply switch turns ON, to start up the UPS in Battery mode once, and then cause it to return to normal operation.

(10) Auto Reboot

• Settings

Set whether to perform auto restart when power is restored after UPS shutdown.

- ON (selected): Performs auto restart when power is restored.

- OFF (cleared): Does not perform auto restart when power is restored.

• Usage

If you do not want to automatically restart the UPS when power is restored.

(11) Auto Reboot Mode(BS Signal)

- Settings

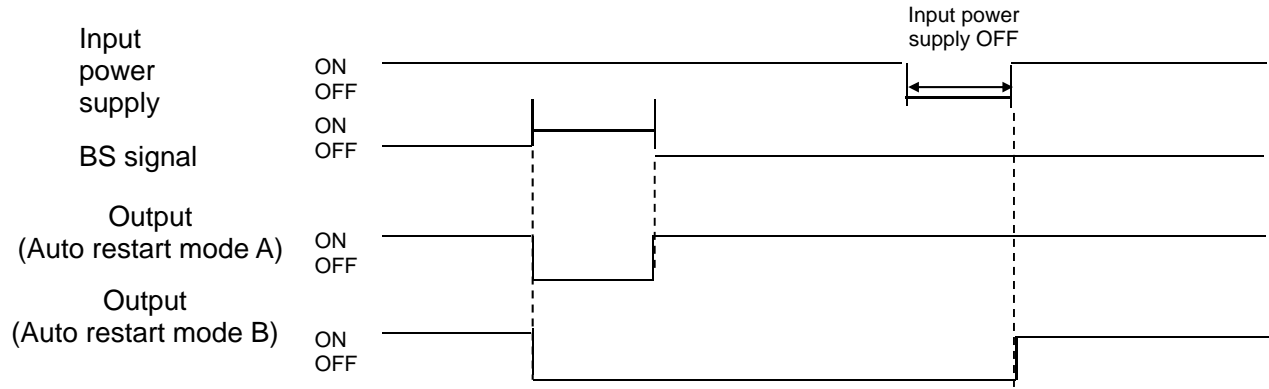
Set Auto restart mode after the UPS is shut down by a BS signal.

- Mode A: Sets Auto restart mode to "Mode A".

After shutdown by a BS signal, the UPS restarts immediately when detecting that the input power supply turns ON.

- Mode B: Sets Auto restart mode to "Mode B".

After shutdown by a BS signal, the UPS restarts when detecting that the input power supply turns OFF, then ON.



- Usage

When finishing the day's work, to terminate the system by stopping the UPS using a BS signal, and turn the input power supply last.

If you want the UPS to automatically restart when the input power supply turns ON in the next morning, set the mode to "Mode B".

6-3. [UPS Dry Contact] group

Omron UPS Setting Utility

UPS Connection

Auto Connect Port Load File

UPS model Save File Exit

Basic | Boot | **UPS Dry Contact** | Load Segments | In/Out | Battery | LCD, Other | Send Command

(12) BS Signal Delay Time * (sec) 9999=Disable

(13) BU Signal Delay Time (sec)

(14) BS Signal Valid Range ☐ ON:Battery mode only/OFF:Always

(15) BS Signal Time

(16) Remote ON/OFF Logic

(17) Dry Contact Logic Reverse

☐ BU ☐ BL ☐ TR ☐ WB

(18) Selectable Output Signal 1

Selectable Output Signal 2

Selectable Output Signal 3

Reload from UPS Restore Factory Setting Save to UPS

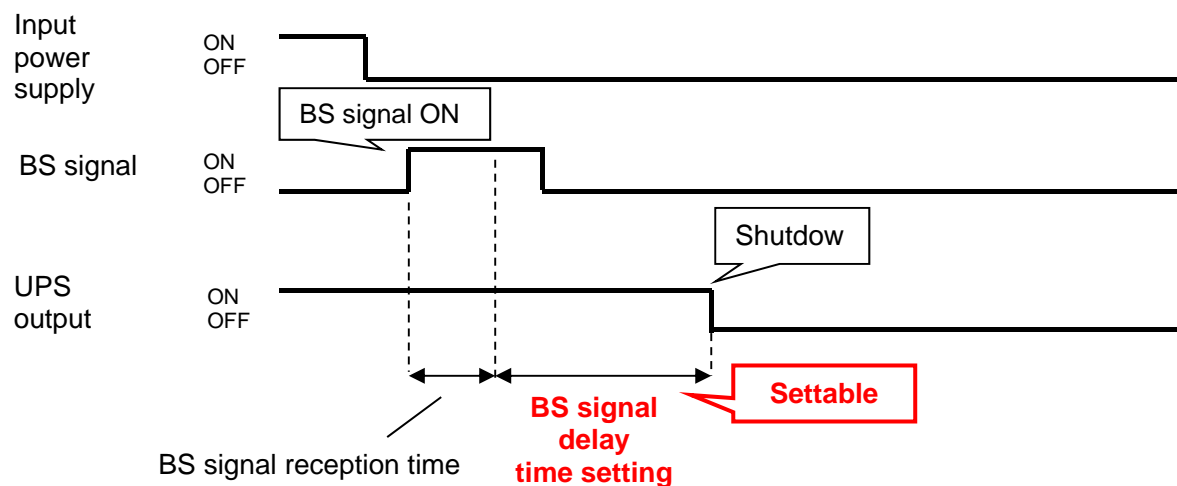
(12) BS Signal Delay Time

• Settings

Set the delay time from when a BS signal (power output stop signal) input is received until the UPS power output is stopped. After receiving a BS signal input, the UPS waits for the specified period of time and then stops outputting power.

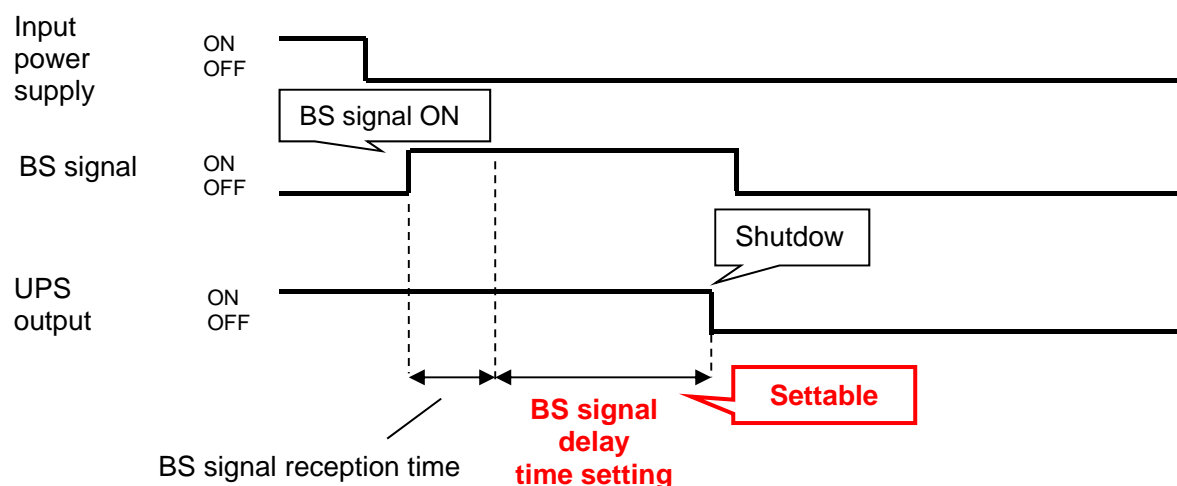
■ For S8BA SBF series

Keep the BS signal ON for at least "BS signal reception time".



■ For S8BA LF series

Keep the BS signal ON for at least "BS signal reception time + BS signal delay time".



• Usage

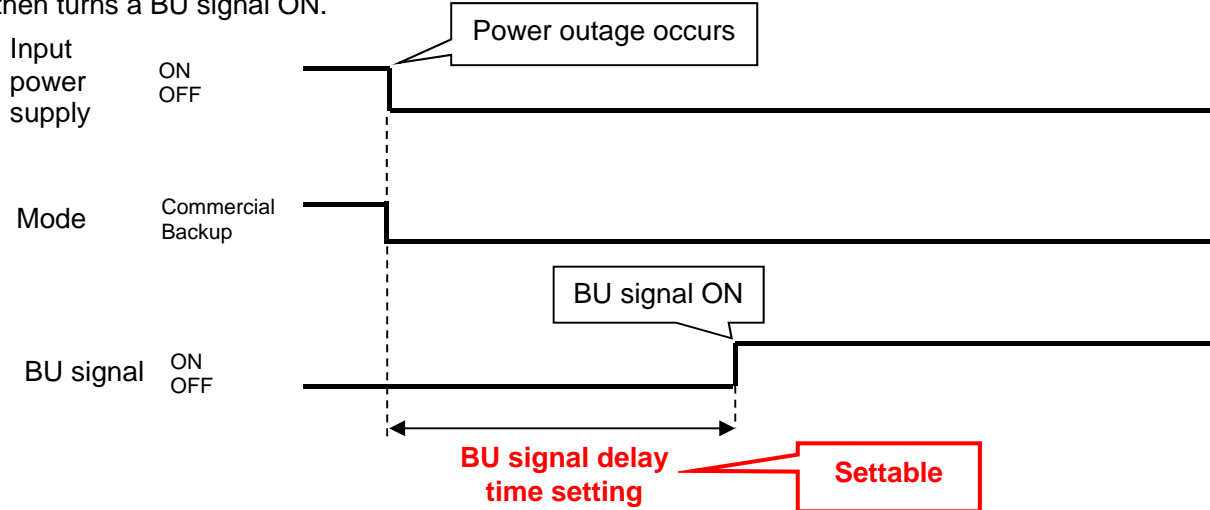
To shut down the UPS using a BS signal from a device whose power is supplied from the UPS such as a computer and PLC.

(After a BS signal input, if you want to shut down the device itself, then the UPS.)

(13) BU Signal Delay Time

- Settings

Set the delay time in the event of a power outage from when the UPS shifts to Battery mode until a BU signal output is turned ON. After shifting to Battery mode, the UPS waits for the specified period of time, then turns a BU signal ON.



- Usage

After the UPS shifts to Battery mode, if you want the UPS to execute shutdown when a certain period of time elapses.

(14) BS Signal Valid Range

- Settings

Set the mode(s) in which a BS signal input is permitted.

- ON (selected): Receives a BS signal input only when in Battery mode.
- OFF (cleared): Receives a BS signal input when in any mode.

- Usage

If you want to restrict the operation to stop the UPS via a BS signal to only when in Battery mode.

(15) BS Signal Time

- Settings

Sets the application time of the BS signal.

If the BS signal is turned ON (High) continuously for the set time or longer, the BS signal is accepted.

- Usage

If you want to restrict the operation to stop the UPS via a BS signal to only when in Battery mode.

(16) Remote ON/OFF Logic

- **Settings**

Set the input logic of remote ON/OFF signal.

- OFF at Close: Turns OFF the output operation when the remote ON and OFF terminals have a short-circuit.
- OFF at Open: Turns OFF the output operation when the remote ON and OFF terminals have an open circuit.
- Disabled: Disables the remote ON/OFF function.

- **Usage**

If you want to reverse the input logic of remote ON/OFF signal.

(17) Dry Contact Logic

- **Settings**

Set the output logic of contact port output signal.

- ON (selected): Outputs in reverse.
- OFF (cleared): Outputs normally.

- **Usage**

If you want to reverse the output logic of output signal.

(18) Selectable Output Signal

- **Settings**

Change the pin assignment of the contact port.

- **Usage**

If you want to change the pin assignment of the contact port.

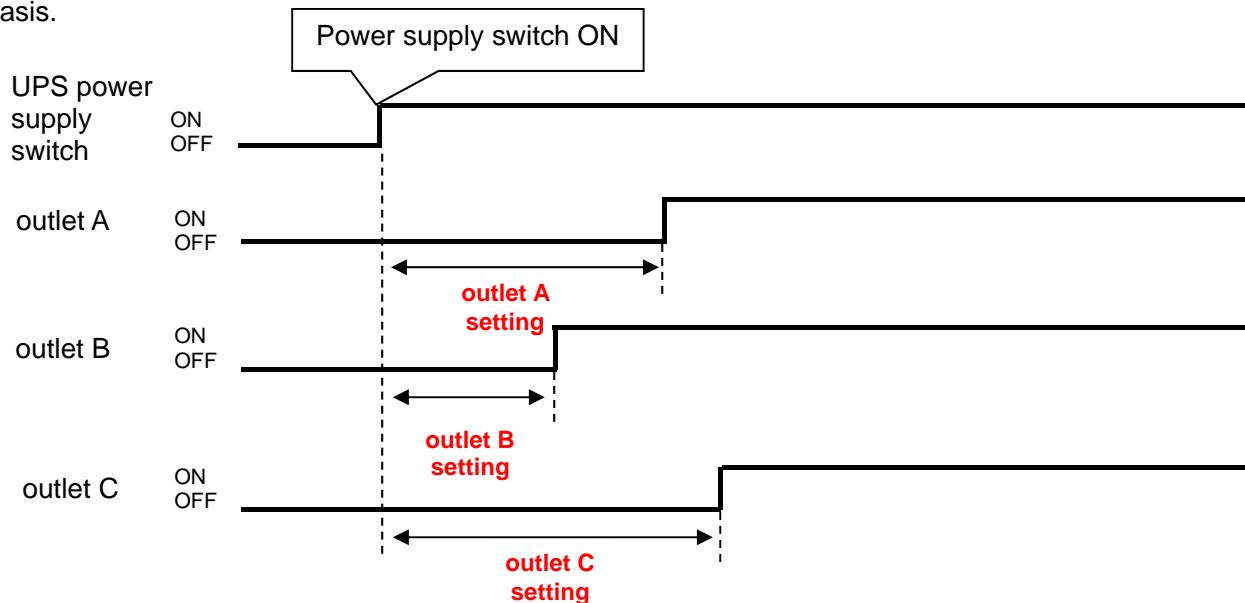
6-4. [Load Segments] group



(19) ON Delay Outlet A/B/C

- Settings

Set the output start delay time for each outlet when the UPS starts. The UPS waits for the specified period of time to start outputting power from each output outlet. You can set the time on a per-outlet basis.



- Usage

If you want to start the connected devices one after another with delay when the UPS starts up.

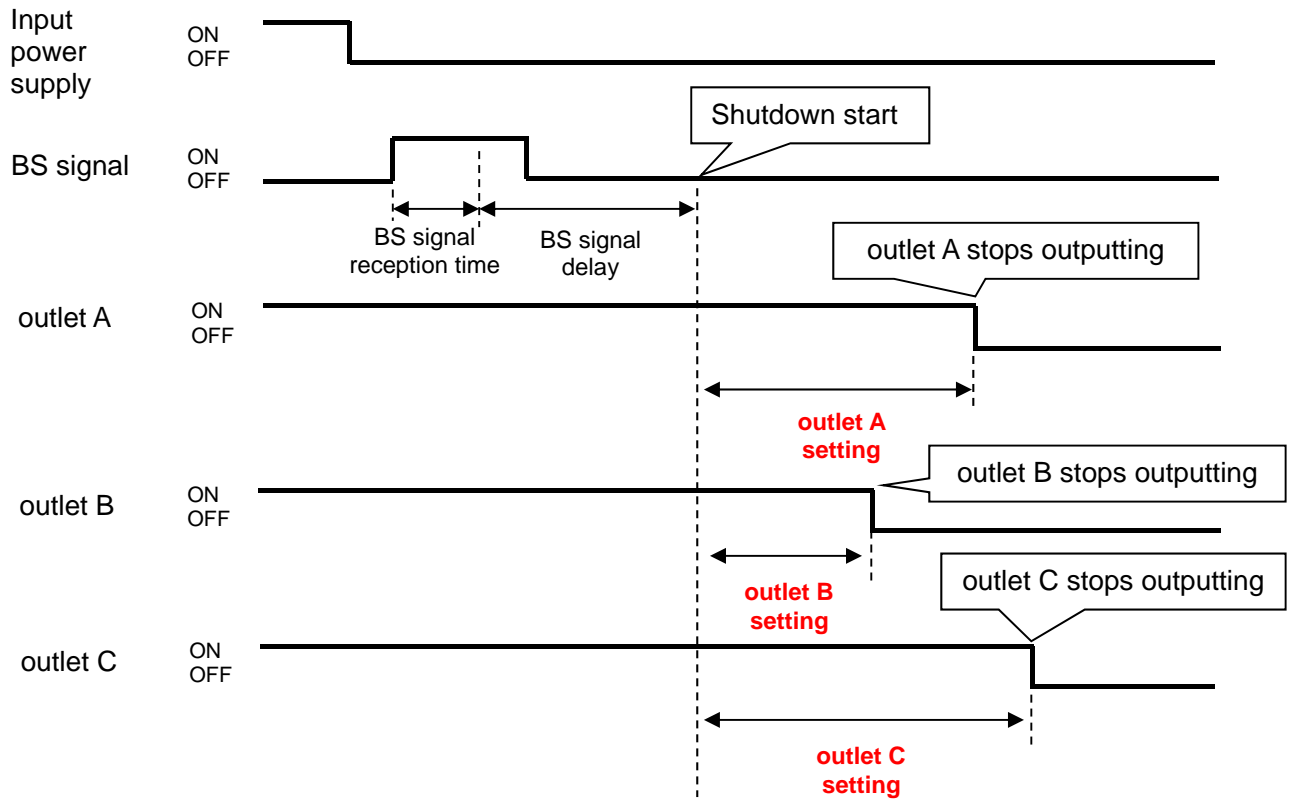
Example 1: To prevent a mount error by starting the server two minutes after starting the storage device.

Example 2: To prevent an inrush current from occurring by starting the connected devices with delay.

(20) OFF Delay Outlet A/B/C

• Settings

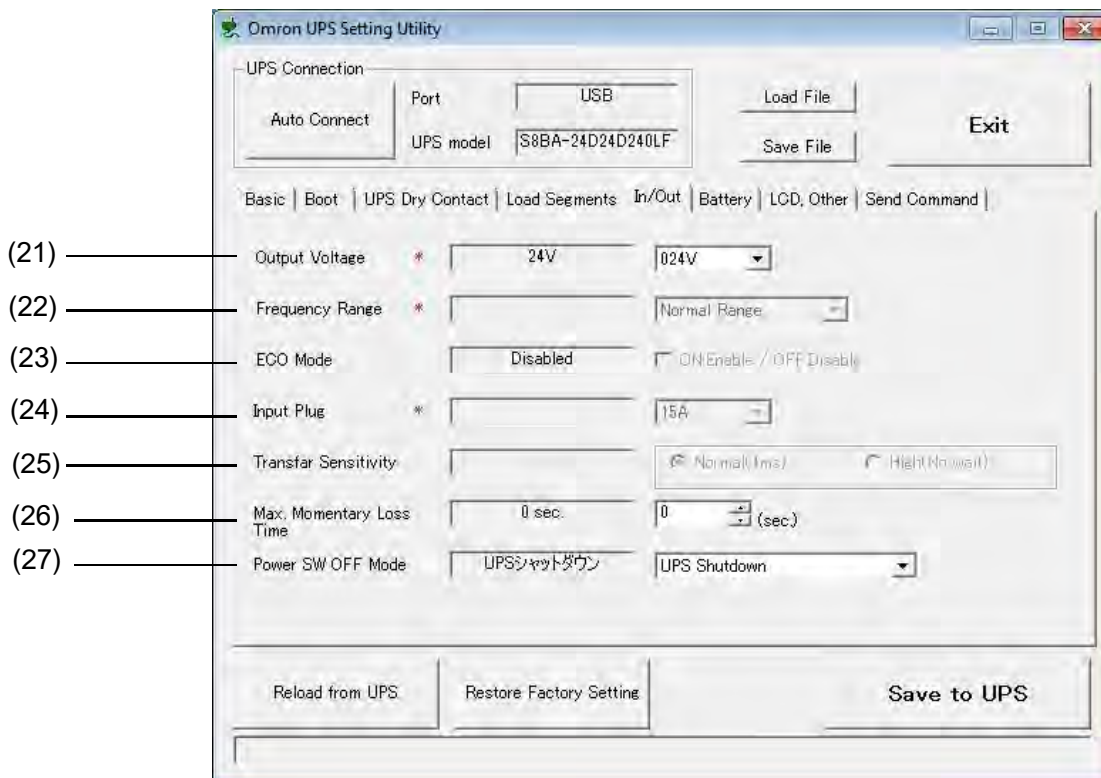
Set the output stop delay time for each outlet when the UPS shuts down. The UPS waits for the specified period of time to stop outputting power from each output outlet. You can set the time on a per-outlet basis.



• Usage

If you want to stop the connected devices one after another with delay when the UPS shuts down.
Example: When the order of stopping devices is restricted due to some reason on the system side.

6-5. [In/Out] group



(21) Output Voltage

- Settings
 - Set the output voltage for the UPS.
 - * This setting can be changed only when the UPS's power supply switch is turned OFF.**
- Usage
 - If you want to change the value for the output voltage.

| | | |
|---|---|----------|
|  | UPS Setting Utility Instruction Manual | |
| | For S8BA | Rev 1.09 |

(22) Frequency Range

- Settings
Set the Frequency synchronization mode for the UPS.
- Usage
If you change the value for the Frequency synchronization mode.

(23) ECO Mode

- Settings
Set whether to enable or disable the ECO mode.
 - ON (selected): Sets the ECO mode as enabled.
 - OFF (cleared): Sets the ECO mode as disabled.
- Usage
If you want to set the UPS to ECO mode.

(24) Input Plug

- Settings
Set the electric current capacity for the input plug of the UPS.
- Usage
If the input plug has been changed.

(25) Transfer Sensitivity

- Settings
Set the voltage drop detection sensitivity for the UPS to identify a voltage drop.
 - Normal (switching by identifying a voltage drop for 1ms): Sets the sensitivity to standard switching sensitivity (a 1ms long voltage drop is detected).
 - High (switching at highest speed): Sets the sensitivity to high switching sensitivity (a 1ms or shorter voltage drop is detected).
- Usage
If you want to change the value for the voltage drop switching sensitivity.

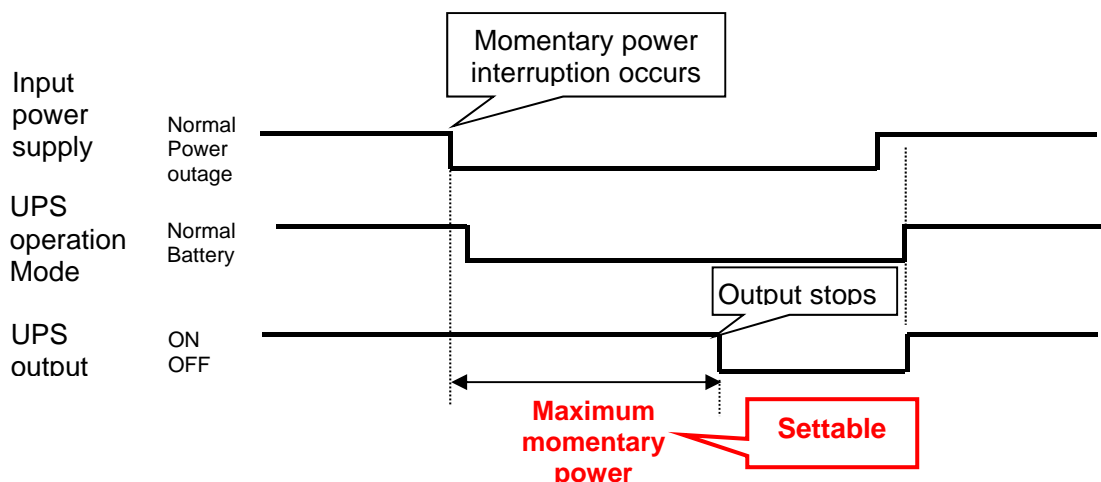
(26) Max. Momentary Loss Time

• Settings

Set the maximum momentary power interruption time for the UPS.

When a momentary power interruption occurs, if detecting that the specified momentary power interruption time elapses, the UPS stops outputting power immediately.

Shutdown software is not required for stopping the UPS.



• Usage

To use the UPS as a protection device against momentary power interruption.

(27) Power SW OFF Mode

• Settings

Set the operation mode to be activated when the UPS's power supply switch is turned OFF.

- UPS shutdown: Performs UPS shutdown.

- UPS+PC shutdown: Performs UPS+PC shutdown.

Operation when [UPS shutdown] is set

1. Turn OFF the power supply switch (hold it down for three seconds).
2. The UPS stops outputting power.

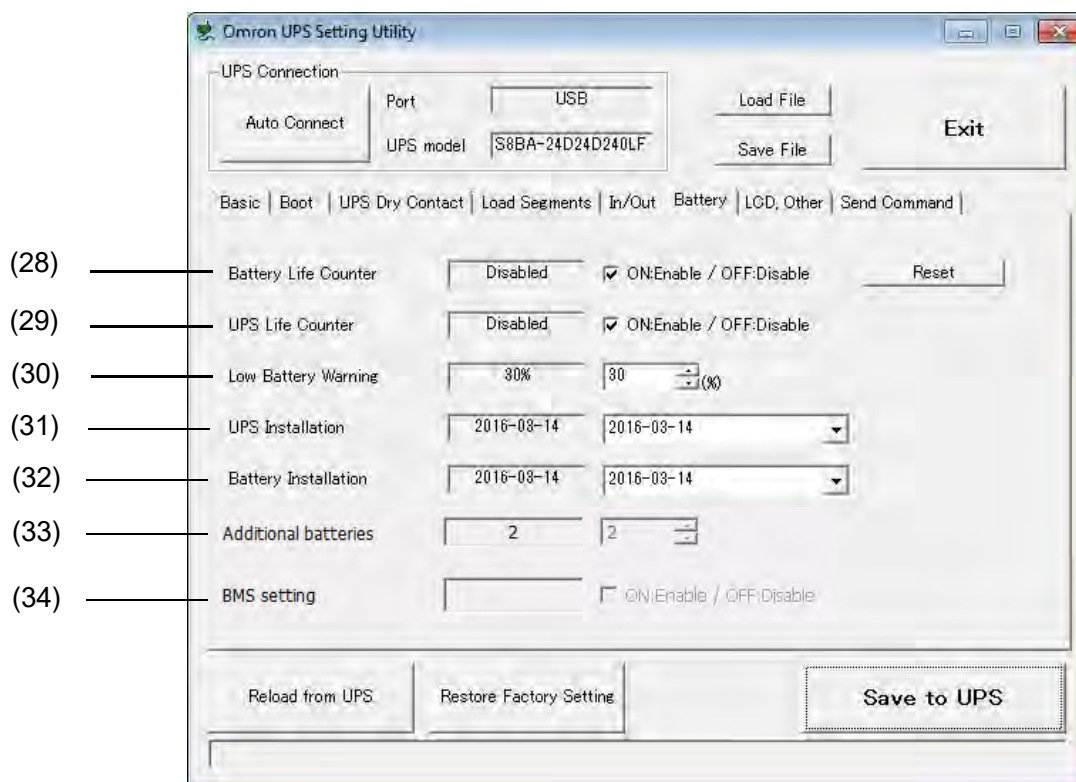
Operation when [UPS+PC shutdown] is set

1. Turn OFF the power supply switch (hold it down for three seconds).
2. A "shutdown instruction" is issued from each communication port to the system.
 - USB port/RS232C port: Make "power outage notification" to SimpleShutdownSoftware (*1).
 - CONTACT port: A BU signal turns ON.
3. Receiving "shutdown instruction", the system performs shutdown (*2).
4. The UPS stops outputting power according to a shutdown instruction from the system.
 - *1 OMRON's automatic shutdown software.
 - *2 This setting is enabled only in the system that shuts down when a power outage occurs.
 - *3 If you hold down the power supply switch for six seconds or longer, the UPS is forced to stop outputting.

• Usage

If you want to shut down the whole system by turning OFF the power supply switch.

6-6. [Battery] group



(28) Battery Life Counter

- Settings
 - Set whether to enable or disable the battery life counter.
 - ON (selected): Sets the battery life counter as enabled.
 - When battery replacement becomes necessary, an alarm is generated.
 - OFF (cleared): Sets the battery life counter as disabled.
- Usage
 - If you want to turn OFF the battery life counter function.

(29) UPS Life Counter

- Settings
 - Set whether to enable or disable the UPS life counter.
 - ON (selected): Sets the UPS life counter as enabled.
 - When the UPS comes to the end of its useful life, an alarm is generated.
 - OFF (cleared): Sets the UPS life counter as disabled.
- Usage
 - If you want to turn OFF the UPS life counter function.

(30) Low Battery Warning

- Settings

Set the low battery alarm detection level.

When in Battery mode, if the battery voltage becomes equal to or lower than the set value, a low battery alarm is generated.

- Usage

If you want to change the low battery alarm detection timing.

(31) UPS Installation

- Settings

Set the UPS installation date.

The set value is used as a record. It does not affect the UPS operation.

- Usage

If you want to record the date the UPS was installed.

(32) Battery Installation

- Settings

Set the battery replacement date.

The set value is used as a record. It does not affect the UPS operation.

- Usage

If you want to record the date the battery was replaced.

(33) Additional batteries

- Settings

Set the number of additional battery units.

- Usage

If you want to record additional battery units.

(34) BMS setting

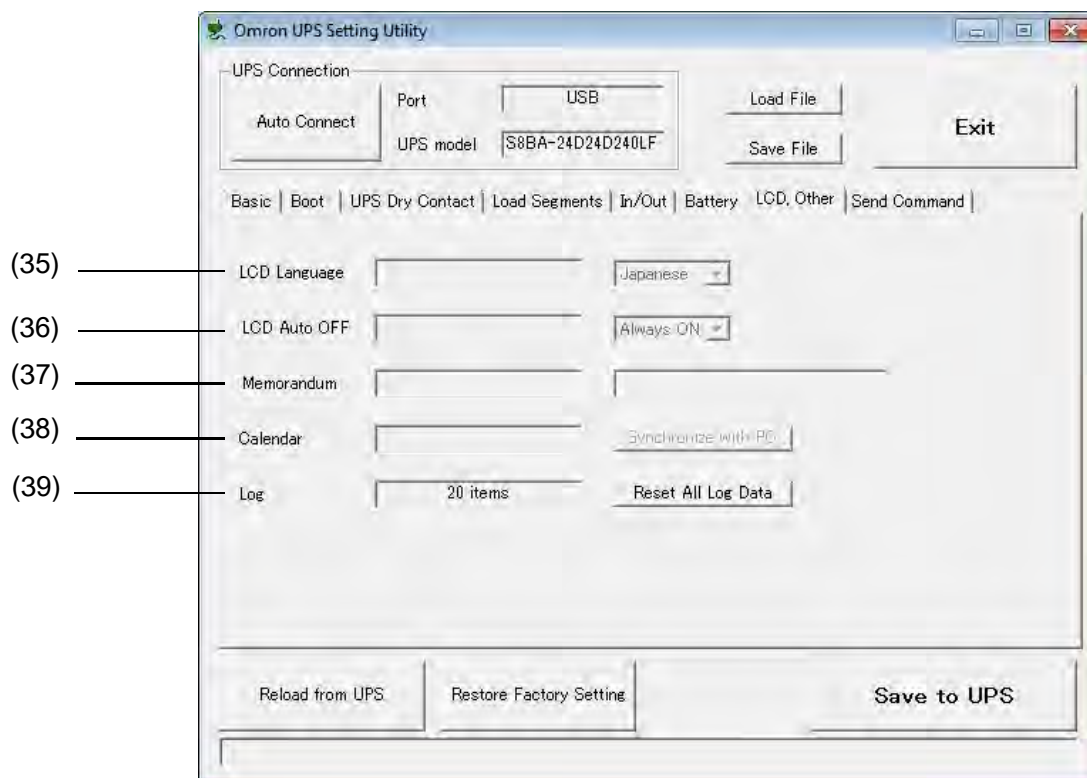
- Settings

Set whether to enable or disable the BMS function.

- Usage

If you want to record the BMS function.

6-7. [LCD, Other] group



(35) LCD Language

- Settings
Set the display language for the LCD panel.
 - Japanese: Sets Japanese for the display language.
 - English: Sets English for the display language.
- Usage
If you want to change the display language for the LCD panel.

(36) LCD Auto OFF

- Settings
Set the auto screen OFF operation for the LCD panel.
- Usage
If you want to change the auto screen OFF operation for the LCD panel.

(37) Memorandum

- Settings
Set the content to be displayed for the memo.
- Usage
If you want to set the content to be displayed for the memo.

| | | |
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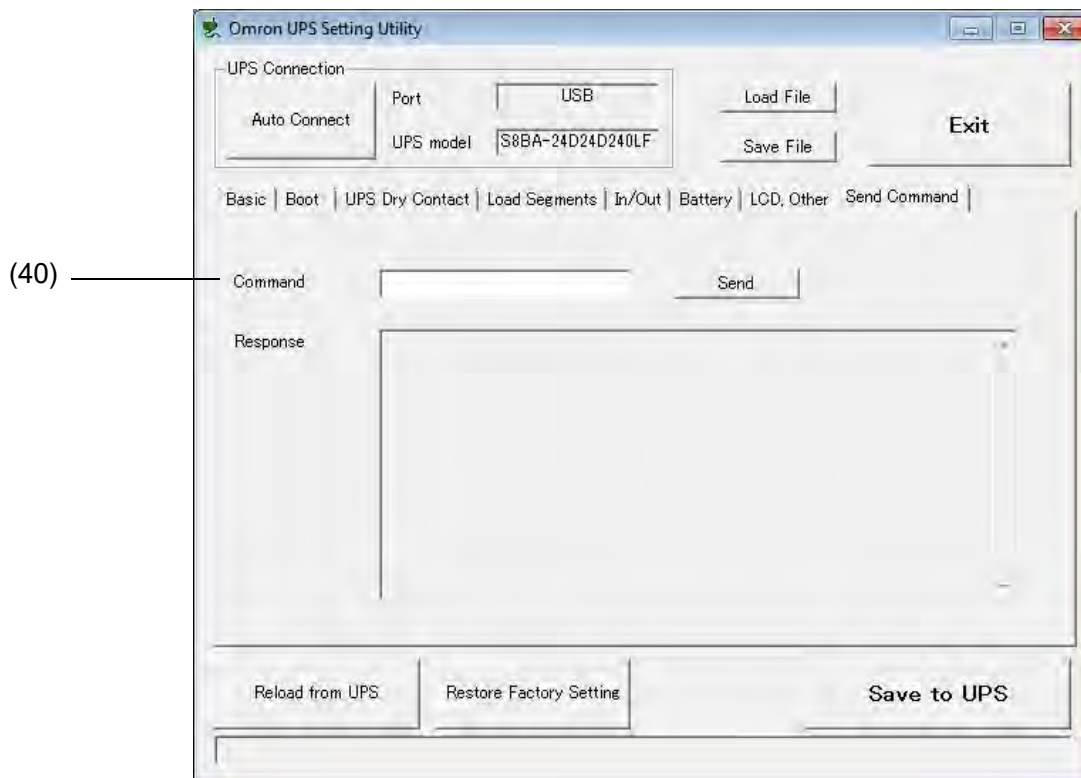
(38) Calendar

- Settings
Set the time for the UPS's built-in clock.
- Usage
If you want to set the time for the UPS's built-in clock.

(39) Log

- Settings
Delete internal log data.
- Usage
If you want to delete internal log data.

6-8. Send Command



(40) Command

• Function

You can send/receive an arbitrary command to the UPS.

- Command: Used to enter the command you want to send to the UPS.
- Send: Click this button to send the command.
- Response: Displays the response data from the UPS.

• Command example

1 If you want to check the battery level

- Command name: BI_? ("_" is a space.)
- Response data: PPP<cr>/Unit:%, Range: 000 to 100%

2 If you want to check the serial number of the product.

- Command name: PSNR
- Response data: #####<cr>

3 If you want to forcibly execute a self diagnosis test (S8BA-24D24D□□□SBF is unsupported)

- Command name: T
- Response data: OK<cr>

4 Read the date of battery replacement

- Command name: BRR<cr>
- Response data : #####<cr>
The "#" is "0" ~ "9". So the response data value is "00000000" ~ "99999999".

5 Write the date of battery replacement

- Command name : BRW#####<cr>
- Response data : OK<cr>

6 Read detect AC-input condition

- Command name : DIC<n><cr>
- Response data : refer to "Note"

<Note>

- 1) When Power switch is ON condition, UPS record the "AC-input condition" in EEPROM in UPS by oneself. Then when UPS receive this command, UPS send the recorded data to PC

- 2) The "<n>" is "0" ~ "9"

This number mean the recode number

So UPS record only the latest 10 information data.

No.0 is the latest data, No.9 is the oldest data

- 3) Data format and meaning is the following.

[Data format] \$:ZZNNNNNNNN<cr>

The meaning of response data is as follow.

| Item | Data | Means | Setting data |
|----------|---------------|--|-----------------------|
| (a) | \$ | Data number | 0 ~ 9 |
| (b) | : | Separator | : |
| (c) | ZZ | Detection code | 01~04 (refer to blow) |
| NNNNNNNN | Counter value | 0x0000~0xFFFFFFFF The unit is second. TOT record counter value | NNNNNNNN |

[Detection code]

| Code | Condition of AC | Remark |
|------|---|----------------------------|
| 01 | AC fail at UPS output ON condition | UPS normal working mode |
| 02 | AC recovery at UPS output ON condition | UPS normal working mode |
| 03 | AC fail at UPS output OFF condition | UPS schedule off condition |
| 04 | AC recovery at UPS output OFF condition | UPS schedule off condition |

7 Forcing battery mode

- Command name : FBM<n><cr> <n>; 0,1
- Response data : OK<cr>

<Note>

- 1) "<n>" is a number of selections for the UPS state.

- a. When UPS is in battery mode and receives "FBM0", UPS goes to line mode.
- b. When UPS is in line mode and receives "FBM1", UPS goes to battery mode.

8 Read the UPS condition

- Command name : Q1<cr>
 - Response data : (MMM.M_NNN.N_PPP.P_QQQ.RR.R_SS.S_TT.T_U<cr>
- <Note>

[Detail]

| Item | Data | Means | Unit |
|------|-------|--------------------------|---------------|
| (a) | “(“ | Start code | --- |
| (b) | MMM.M | Input voltage | V rms |
| (c) | NNN.N | Input fault voltage | V rms |
| (d) | PPP.P | Output voltage | V rms |
| (e) | QQQ | Output load | Percentage(%) |
| (f) | RR.R | Input frequency | Hz |
| (g) | SS.S | Battery voltage | V dc |
| (h) | TT.T | UPS internal temperature | Degree-C |
| (i) | U | UPS status | (8bit) |

“U” is the 8 bits binary data.

The meaning is the following.

| Bit# | Condition | | |
|------|---------------------------|---|--|
| | Meaning | “1” | “0” |
| 7 | AC I/P | AC fail | Normal |
| 6 | Battery level | Battery Low | Normal |
| 5 | Bypass Active | Inbypass mode(when in commercial operation) | In inverter operation(when in battery operation) |
| 4 | Self-diagnosis test resul | Fault | OK |
| 3 | UPS Type | Off-line | On-line |
| 2 | Test flag | In test mode | Not test mode |
| 1 | Shutdown Active | Waiting timer up | Normal |
| 0 | Battery condition | Weak condition | OK |

9 Checking UPS model identity information

- Command name : Si_?<cr> <Note> : The mark “_” means the one space character.
- Response data : #####<cr>

10 Read total backup number

- Command name : TBN_?<cr> <Note>:The mark “_” means the one space character.
- Response data : #####<cr> Unit of ####: times (00000 ~ 99999)

11 Read UPS total operating time

- Command name : TOT_?<cr> <Note> : The mark “_” means the one space character.
 - Response data : #####<cr>
- <Note>

- 1) Unit of #####: minute (0x0000~0xFFFFFFFF Hexadecimal)
*Decimal : 0~4294967295 seconds

12 Read the current battery temperature (00000 ~ 40320) (S8BA-24D24D□□□SBF is unsupported)

- Command name : TPb<n><cr>
- Response data : #\$.\$.<cr>

<Note>

- 1) “<n>” represents the battery unit number. “1” is set to read the battery voltage of the 1st battery unit, and “2” is set to read that of the 2nd battery unit.
- 2) The “#” is “-” or “+”, and the “\$” is “0” ~ “9”.
- 3) The unit of this value is the “degree-C”

13 Read the current control unit temperature (S8BA-24D24D□□□SBF is unsupported)

- Command name : TPc<cr>
- Response data : #\$.\$.<cr>

<Note>

- 1) The “#” is “-“or“+”, and the “\$” is “0” ~ “9”.
- 2) The unit of this value is the “degree-C”.

14 Read trouble status

- Command name : TRS<cr>
- Response data : “##”<cr>

<Note>

- 1) The “#” is “0” ~ “9”.
- 2) IF current UPS is normal condition (not error condition), UPS send “00<cr>”.
- 3) IF current UPS condition is Fault, UPS send this Fault Code .
Even if UPS detected the fault ago , but this fault disappear now, UPS do not send this fault code.
- 4) The Fault Codes are the same as UAS Fault Code.
For example, the current UPS is over load condition, in this case, UPS send the “17<cr>”.

15 Read UPS abnormal status information

<Not using Real Time Clock>

- Command name : UAS<n><cr>
- Response data : refer to “Note”

<Note>

- 1) UPS record the “UPS fault” data in EEPROM in UPS by oneself. When UPS receive this command, UPS send the recorded data to PC.。
- 2) The “\$” is “0” ~ “9”
This number means the recode number.
So UPS record only the latest 10 fault data.
No.0 is the latest data, No.9 is the oldest data
- 3) Data format and meaning is the following.
[Data format] \$:ZZNNNNNNNN<cr>
The meaning of response data is as follow

| Item | Data | Means | Setting data |
|----------|---------------|---|--------------|
| \$ | Data number | 0 ~ 9 | \$ |
| : | Separator | : | : |
| ZZ | Fault code | 01~20 (refer to blow) | ZZ |
| NNNNNNNN | Counter value | 0x0000~0xFFFFFFFF The unit is second. TOT Record the counter value. | NNNNNNNN |

[Fault code]

| Fault Code | Meaning | UPS model | |
|------------|---|------------------|-------------------|
| | | S8BA-24D24D□□□LF | S8BA-24D24D□□□SBF |
| 01 | Output over voltage | ○ | ○ |
| 02 | DC bus voltage error | ○ | ○ |
| 03 | Output short | ○ | ○ |
| 04 | Over load time out | ○ | ○ |
| 05 | Battery over charge | ○ | ○ |
| 06 | Battery under charge | ○ | ○ |
| 07 | Over temperature | ○ | ○ |
| 10 | Internal CPU communication error | ○ | ○ |
| 11 | Output under voltage | ○ | ○ |
| 13 | Bat-Config. fail | ○ | ○ |
| 14 | CPU operation failed | ○ | ○ |
| 16 | Excessive charging current | ○ | ○ |
| 17 | Over load | ○ | ○ |
| 18 | Battery weak | ○ | ○ |
| 19 | Battery empty | ○ | ○ |
| 20 | Battery temperature error | ○ | ○ |
| 21 | UPS life counter UP | ○ | ○ |
| 29 | CPU error (interrupt and exception, WDT) | ○ | × |
| 31 | Battery unit communication error | ○ | × |
| 31 | Battery temperature low | × | ○ |
| 32 | Battery temperature error | ○ | × |
| 32 | BMS Over Current | × | ○ |
| 33 | Battery temperature error | ○ | × |
| 33 | BMS Internal Error | × | ○ |
| 34 | Charger Fail | × | ○ |
| 35 | BMS Cell Over Volt | × | ○ |
| 36 | BMS Cell Under Volt | × | ○ |

○ : Settable × : Not settable

16 Read UPS output shutdown information

<Not using Real Time Clock>

- Command name : UOS<n><cr>
- Response data : Refer to "Note"

<Note>

- 1) UPS record the "UPS output shutdown" information in EEP-ROM in UPS by oneself. When UPS receive this command, UPS send the recorded data to PC.
- 2) The "\$" is "0" ~ "9"
This number means the recode number.
So UPS record only the latest 10 information data.
No.0 is the latest data, No.9 is the oldest data.

3) Data format and meaning is the following

[Data format] \$:ZZNNNNNNNN<cr>

The meaning of response data is as follow

| Item | Data | Means | Setting data |
|----------|---------------|---|-----------------------|
| (a) | \$ | Data number | 0 ~ 9 |
| (b) | : | Separator | : |
| (c) | ZZ | Shutdown code | 01~08 (refer to blow) |
| NNNNNNNN | Counter value | 0x0000~0xFFFFFFFF The unit is second. TOT Record the counter value. | NNNNNNNN |

[Shutdown code]

| Code | Shutdown reason | Remark |
|------|-----------------------|---|
| 01 | Power switch turn off | |
| 02 | S command | |
| 03 | Sf command | |
| 04 | SR command | |
| 05 | Scr command | |
| 06 | BS signal | |
| 07 | Remote on/off signal | |
| 08 | Abnormal condition | Detect condition is the same as UAS command |
| 09 | BUTcommand | |
| 10 | MLTcommand | |
| 11 | Discharge stop | |

17 Read the date of UPS installation

- Command name : UIR<cr>
- Response data : #####<cr>

<Note>

1) “#” is a number in the range from “0” to “9”.

“#####” = “YYYYMDD” : YYYY(year) / MM(month) / DD(day)

18 Write the date of UPS installation

- Command name : UIW#####<cr>
- Response data : OK<cr>

Function : Write the date of UPS installation.

19 Read UPS life counter value

- Command name : ULR<cr>
- Response data : #####<cr>

20 Read battery life counter value

- Command name : YBR<cr>
- Response data : #####<cr>

7. Configuration items list

| | | S8BA-24D24D□□□ LF | S8BA-24D24D□□□ SBF |
|----|-----------------------------|----------------------|-----------------------|
| 1 | Audible Alarm | ⊙ | × |
| 2 | AC Input Sensitivity | ⊙ | × |
| 3 | Cold start | ⊙ | × |
| 4 | Max backup Time | ⊙ | ⊙ |
| 5 | Start up Self Test | ⊙ | × |
| 6 | Every 4 week Self Test | ⊙ | × |
| 7 | Reboot Delay Time | ○ | ○ |
| 8 | Reboot Battery Level | ⊙ | ○ |
| 9 | DC Start | × | × |
| 10 | Auto Reboot | ⊙ | ○ |
| 11 | Auto Reboot Mode(BS Signal) | ⊙ | × |
| 12 | BS Signal Delay Time | ⊙ | ○ |
| 13 | BU Signal Delay Time | ⊙ | ○ |
| 14 | BS Signal Valid Range | ○ | ○ |
| 15 | BS Signal Time | ○ | ○ |
| 16 | Remote ON/OFF Logic | ⊙ | ○ |
| 17 | Dry Contact Logic | ○ | ○ |
| 18 | Selectable Output Signal | × | × |
| 19 | ON Delay Outlet A/B/C | × | × |
| 20 | OFF Delay Outlet A/B/C | × | × |
| 21 | Output Voltage | × | × |
| 22 | Frequency Range | × | × |
| 23 | ECO Mode | × | × |
| 24 | Input Plug | × | × |
| 25 | Transfer Sensitivity | × | × |
| 26 | Maximum Momentary Loss Time | ○ | × |
| 27 | Power SW OFF Mode | ⊙ | × |
| 28 | Battery Life Counter | ⊙ | ○ |
| 29 | UPS Life Counter | ○ | ○ |
| 30 | Low Battery Warning | ○ | ○ |
| 31 | UPS Installation | ○ | ○ |
| 32 | Battery Installation | ○ | ○ |
| 33 | Additional batteries | × | × |
| 34 | BMS setting | × | × |
| 35 | LCD language | × | × |
| 36 | LCD Auto OFF | × | × |
| 37 | Memorandum | × | × |
| 38 | Calendar | × | × |
| 39 | Log | ○ | ○ |
| 40 | Command | ○ | ○ |

⊙: Settable (Settable in the main unit) ○: Settable (Not settable in the main unit) ×: Not settable

| | | |
|---|---|----------|
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8. Uninstallation and Operation Check

To uninstall this product, take the following procedure.

[Uninstallation procedure]

- 1 Terminate the " UPSSettingTool.exe ".
- 2 Move "UPSSettingTool.exe" into the [Trash] to delete it.

End of document